

REMARKS

In the Office action, all claims were rejected as anticipated by or unpatentable over Chauval (EP 0840512A2). In light of the foregoing amendments and the following remarks, reconsideration and allowance of the application are respectfully requested.

Chauval is directed to integrated audio/video circuitry. In particular, Chauval discloses the use of a single microprocessor, the ARM/CPU, which coordinates the activity of numerous hardware modules that are preferably integrated into a single chip. (Chauval, page 3). In particular, the modules of Chauval include a transport packet parser, a communications co-processor, and an on-screen display module, all of which are controlled by the ARM/CPU. (Chauval, page 10 and FIG. 1). Importantly, in the Chauval system, the ARM/CPU is responsible for received packet processing (Chauval, page 4), on-screen data processing, and user interface processing (Chauval, page 5). Chauval discloses that one of the advantages of the Chauval system is the fact that the circuitry is condensed onto a single chip and that no external CPU is needed to operate the system, due to the integrated ARM/CPU – i.e., the Chauval system is a single processor system. (Chauval, page 4).

As amended, the claims now recite systems and methods including operations performed by first and second processors that execute software instructions to perform real time and non-real time functions. These functions are performed on separate processors. In particular, it is recited that the real time functions include, *inter alia*, controlling conditional access and the non-real time functions include, *inter alia*, controlling a graphical user interface.

It is respectfully submitted that Chauval does not disclose or suggest the elements of the claims as they now stand. For example, Chauval does not disclose or suggest the use of first and second processors, which execute software instructions, to carry out real time and non-real time functions. To the contrary, Chauval discloses a single software/firmware executing processor – the ARM/CPU – that manages the real time and non-real time functions of the Chauval system. In performing its functions, the ARM/CPU uses hardware peripherals to manage real time and non-real time functions, but these hardware peripherals do not appear to execute software instructions and, instead, are hardwired devices. In particular, with regard to the conditional access functionality and the graphical user interface,

the ARM/CPU works with the transport parser and the OSD module to perform these functions, respectively.

In addition to its failure to disclose or suggest the use of two software-executing processors, Chauval fails to disclose the segmentation of real time and non-real time functionality between two software-executing processors. To the contrary, the ARM (the sole software executing processor) is involved in both of the claimed aspects. This is a significant difference given the advantages provided by the recited architecture in the claims. The specification of the instant invention indicates that better stability and security are provided by the separation between processors of real time and non-real time functions. (Yap, paragraphs 0025, 0026). This segmentation is particularly important given the fact that aftermarket software developers may be hired to construct a number of different user interfaces that would run on the non-real time processor. By keeping the user interface software and processing separate from the real time processor, which handles packet reception and conditional access, there is a greatly reduced chance of a user interface developer intentionally or unintentionally hacking into the complex real time processing software.

Based on the claims as amended and the foregoing remarks, allowance of the case is respectfully requested.

EXAMINER INTERVIEW SUMMARY

The undersigned would like to thank Examiner Boccio for the telephonic interview that was conducted today. While no specific agreement was reached regarding particular claims, it is believed that the case was advanced substantially through the interview.

CONCLUSION

Reconsideration of the application and allowance thereof are respectfully requested. If there is any matter that the examiner would like to discuss, the examiner is invited to contact the undersigned representative at the telephone number set forth below.

Respectfully submitted,
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